From: Gray, Earl [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=BFC866B84A27421FA0BF51A7A1BEB6A3-GRAY, LEON]

**Sent**: 6/7/2019 6:58:47 PM

To: Marty, Sue (S) [MSMarty@dow.com]
Subject: RE: PFAS IN VIVO DEVELOPMENTAL WORK

Your comments would be much appreciated. Thanks
Earl

----Original Message----

From: Marty, Sue (S) <MSMarty@dow.com> Sent: Friday, June 07, 2019 2:57 PM To: Gray, Earl <Gray.Earl@epa.gov>

Subject: RE: PFAS IN VIVO DEVELOPMENTAL WORK

Hi Earl,

Thanks for your email. I am doing well. I hope that you are doing well also. It looks like your research continues to be timely and interesting - good to see. I am not an expert in PF compounds (I think Dow's issues are primarily related to use of firefighting foams, so we are monitoring to see how these uses will be managed). Of course, PFs are a 'hot' regulatory issue; I just returned from an EPA SAB meeting and we were given an interesting overview on the EPA research program related to PF compounds. It is quite impressive.

If you are OK with an uninformed opinion, I will have a look at your paper this weekend and see if I have any thoughts to share. Unfortunately, I am not going to Teratology (I have an SOT program committee meeting the same week and I have been doing a lot of traveling), so we may be limited to an email exchange or phone call.

Have a good weekend!

Sue

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----Original Message----From: Gray, Earl [mailto:Gray.Earl@epa.gov]

Sent: Thursday, June 06, 2019 10:35 AM
To: Marty, Sue (S) <MSMarty@dow.com>
Subject: PFAS IN VIVO DEVELOPMENTAL WORK

Sue, hope you are well

thought you might be interested in our developmental/postnatal work on the PFAS GenX. We are also working on several other PFAS and are about to initiate an in utero mixture study.

I thought I would send this and see if you had any comments, criticisms or suggestions for improvement. we have completed a pre=postnatal study with GenX that included full gestational exposure (GD 8 to PND 3) and saw extensive postnatal mortality in newborns with 24 hrs after birth. Much like PFOS, but at higher dosage levels

our data on maternal PFAS levels indicate that most of the effects are seen at internal conc levels that exceed those seen in factory workers.

In addition, a human biomonitoring study conducted by NCSU CHE did not find any detectable levels of GenX in human blood or urine. they did find other novel chemicals and we are now studying one of those (Nafion by product 2).

It seems to us that comparing internal exposure levels of the PFAS chemicals is an important measurement to extrapolate the relevance of our oral dosage levels to pregnant rats to human exposures.

We also feel that it is important to determine how many pathways are altered by the different PFAS chemicals including, but not limited to PPAR alpha

Going to Teratology at the end of June, are you going. Could chat then

Take care

Earl